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ABSTRACT

Arguments against competency testing surface continually, and classic counter-arguments reoccur. Nevertheless, minimum competency testing and other accountability efforts have much public support. Those claiming that the tests are not relevant or do not have predictive validity, also say they are coachable and biased. Answers are given to these arguments; along with three situations of testing "wronged students": (1) by limiting a student's opportunities; (2) by risking psychological health; (3) by invading privacy and violating confidentiality. Besides educational programs and teachers being harmed, there is claim that the tests, being conceived by the upper middle class are promoting elitist values. These attacks are presented, the objections outlined, legitimate failings corrected and forceful, logical arguments presented in favor of testing. The document grants that access to the sources of relevant skill and information is unequal. However, in the long run, society will benefit not by giving special treatment to all members of special groups without regard to the opportunities that specific individuals in the group have had, not by offering preferrential treatment on the basis of some general inherited characteristic, but by equalizing the opportunities for all people. (Author/CE)

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Protesting the Detesting of PRO Testing*

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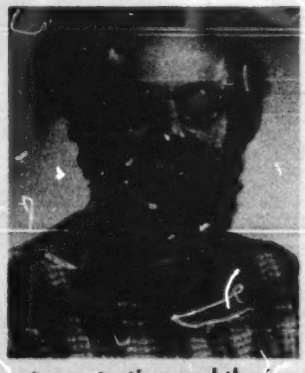
ABOUT THIS ISSUE



This paper represents Dr. Millman's annual Presidential address delivered before the National Council on Measurement in Education, April, 1980. Dr. Millman's thoughts on minimal competency testing are as fresh as if they were delivered yesterday, for the outlines of the problems connected with competency testing and the issues surrounding this type of testing really haven't changed much. Others have examined the criticisms leveled at this type of testing and many of their counter-arguments are those presented in this paper. Yet few of those who defend minimal competency testing have done so more eloquently than the analysis presented here.

Dr. Millman's careful attention to the arguments of the critics makes his reactions to them all the more effective. But herein lies the crux to an even more fundamental problem. Who is listening to whom? The same arguments against competency testing continue to surface time after time; the same counter-arguments are leveled at the critics. Even when thoughtful demonstrations such as this one aimed at sending a message that scholars interested in educational measurement are reading the criticisms and are thinking about them, no measureable curcease can be observed among the critics. It's as though the critics are more interested in the criticisms than in the dialogue these arguments should generate.

Dr. Jason Millman is Professor of Education at Cornell University, and a former President of the National Council on Measurement in Education.

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Four years ago, on the occasion of his National Council on Measurement in Education (NCME) presidential address, Thomas Fitzgibbon asked in the title of his speech, "Dear Mama, Why Don't They Love Me Anymore?" Tom, not only isn't the testing industry loved anymore, now it is being attacked as a "mindless, paranoid, stagnant, technology obsessed business that is hopelessly prone to all manner of abuses against the human spirit."[1] The encounter with Ralph Nader over admissions testing is but a recent battle. As Barbara Lerner writes:

Nader's young raiders are, after all, relatively fresh troops in this war. Leaders of the NEA preceded them in combat, calling for a national moratorium on the very tests that showed what an inadequate job they were doing. Leaders of the NAACP also attacked test results early on . . . because they show that integration alone cannot solve the problems of illiterate black youth.[2]

The testing industry does have its allies, however. Minimum competency testing and other accountability efforts do have much public support. The Gallop Poll indicates that three-fourths of the American public believe that standardized tests are useful. Nevertheless,

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the foes of professionally developed, standardized tests (the PRO tests) are well armed, and some of their bullets have hit home.

Why the war? First, there are unspoken motivations for the attacks, which one can only infer. Lerner believes that

> Tests are under attack today because they tell us truths about ourselves and our society; partial truths, to be sure, but truths nonetheless and, in recent years, many of these truths have been unpleasant and unflattering.[3]

Second, there are many explicitly stated objections to tests and testing. For each alleged weakness, I shall summarize the case being made by the anti-test forces and provide my analysis of the issues. I'm just enough of a rationalist to believe that the best defenses against the attacks on testing are to be informed about what the objections are, to correct legitimate failings, and to argue forcefully and logically in favor of testing when it is right to do so. My hope is that this paper will promote all three defenses.

Tests Themselves are Flawed

The first alleged failing of educational tests is that they are flawed by being irrelevant educationally, invalid predictively, coachable, and biased.

Relevance. The argument about educational irrelevancy is captured by this testimony before Congress:

> Standardized tests are top-down impositions on teachers which are perceived as nuisances and have little, if any, pedagogical worth. Teachers and students learn strategies to cope with standardized tests, and the result can be improved scores, but this system of coping ought to be seen for what it is: success in coping with tests, not improved education.[4]

Elliot Eisner put it more succinctly. "The vast majority of teachers and administrators know full well that education is not something that can be reduced to reading and math scores."[5]

Of course schooling is more than learning reading and mathematics. Patience, honesty, and empathy are but a few of the characteristics that many of us would like in our children. But that does not deny the importance of reading and math skills, which, besides, schools are probably best equipped to teach. Schools ought to be concerned if students don't do well on the kinds of questions asked on standardized tests. There are certainly enough standardized tests to choose from; there are major differences of emphasis, even among the major survey achievement test batteries, for schools to find test tasks relevant to their instructional programs.[6]

There are two additional aspects to the argument that tests are educationally irrelevant. One is that "test content measures mainly recall-type learning, neglecting the higher thought processes -- analyzing, synthesizing, and drawing generalizations and applying them to new phenomena."[7] A careful task analysis of many available tests would simply refute this claim.

The other educational irrelevancy argument is that survey tests of achievement are not sufficiently diagnostic to be useful for instructional guidance. This argument does have merit. The well-intentioned efforts of producers of standardized achievement tests to provide diagnostic information have, for the most part, been insufficient. Reporting performance on one or a few items, with the arbitrary features that are present in any item, may actually be more misleading than no such information. The problem is the bandwidth/fidelity dilemma that Cronbach and others identified some time ago: how to provide information on many skills (broad bandwidth) while providing accurate information (high fidelity) about any one skill. At least for the present, the answer seems to be that we shouldn't expect any one test to do everything. Until drastic changes are made in how tests are developed, we should recognize that survey tests are just not very good diagnostic tools (they serve other purposes) and that if educators want more diagnostic information, they should use other devices that are available or possible.

Validity. A recently claimed flaw of educational tests is that they do not have predictive validity. As Nader puts it,

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1. Test takers should be provided with information on the range of knowledge and skills to be tested, the conditions under which a test is to be taken, the types of test questions to be included, and the way a test is to be scored.

2. Test takers should know that the test questions which they are called on to answer have not been made public prior to test administration.

3. Test takers should have assurance that their tests have been scored accurately.

4. Test takers, and test users, should have assurance that the tests they are taking, or using, meet professional criteria of good question writing, validity, and reliability.[23]

To see that these principles are adhered to, NCME proposed the establishment of a broadly representative commission to monitor and improve the conduct of educational admissions testing programs.

Tests Promote Elitist Values. The claim is made that The tests were conceived by the upper class, and have served as a formidable barrier to millions of students, unjustly diminishing their higher education and career opportunities.[24]

In Barbara Lerner's view, Nader and the leaders of the NAACP and NEA share a common suspicion or conviction

> ... that most tests in common use incorporate the arbitrary, elitist standards of a racist society and impose unnecessary and unjustified burdens on minority members. Directly or indirectly, these leaders reject the idea of common standards of academic and vocational competence, insisting that minority group members must be judged by special standards, by subjective standards, or by no standards at all.[25]

It is true that access to the sources of relevant skill and information is unequal. However, society, in the long run, will benefit not by giving special treatment to all members of special groups without regard to the opportunities that specific individuals in the group have had, not by offering preferential treatment on the basis of some general inherited characteristic, but by equalizing the opportunities for all people.

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ered an invasion of privacy. What is important from the point of view of protecting the individual is to be sure that the information sought is relevant to the purpose of the testing, is sufficiently important relative to the magnitude of the intrusion, and is secured with the consent of the individual involved.

Individuals should have access to their own test information in a form that they can understand. But third parties should not have such information in personally identifiable form. Clinton Chase reminds us of several classroom practices that may violate these principals: (1) compiling score distributions by a show of hands, (2) students marking other students' papers, (3) students sorting out their own papers from a class pile, (4) posting papers, (5) posting class rosters with test scores, and (6) associating remedial work or special privileges with scores on tests.[16]

Educational Programs and Teachers Are Harmed

Control Curriculum. The concern about the influence of tests on school curricula has been expressed as follows:

> America's over-reliance on standardized test scores has forced educators to increasingly alter their curriculum to conform to the limited content of what a multiple-choice test can evaluate.[17]

The testing companies answer their critics observing that tests mirror the curriculum, not lead it.

> The critics respond:
> Standardized tests are anchored in standard curriculum materials ... that have predetermined expectations toward which everyone is expected to work. To actually develop a responsive, developmental, classroom environment is to risk lower scores on many of the standardized tests. Teachers and children do not need these kinds of external pressures.[18]

One response to this latter criticism of tests is that teachers who wish to emphasize skills not covered by tests should be prepared to argue why what they want to teach is better and document that they are teaching what they say they do.

Standardized tests, especially when they are used as part of an accountability system, do influence school curriculum and instruction, as the experience with the New York State Regents Examinations amply demonstrates. The discussion of the effect of tests on curriculum suggests that there is a trade-off between the power of tests to focus curriculum and instruction on important educational goals and the tendency of such examinations to devalue untested learning and inhibit innovation. Accessible and high quality instruments to measure all important educational goals would go a long way toward solving the apparent conundrum.

Take Time from Instruction. The issue of overtesting is illustrated by a cartoon in which a young child is speaking at the dinner table with her parents.

> What with the Primary Mental Ability Test and the Differential Aptitude Test and the reading readiness test and the basic skills test and the I.Q. test and the Sequential Tests of Educational Progress and the Mental Maturity Test, we haven't been learning anything at school.

There is, on the average, more standardized testing in this country than necessary, occasioned in part by inappropriate requirements for evaluating federal programs, annual measurement of relatively stable developed abilities not specially targeted by instruction, and every-pupil testing as part of large-scale *program* evaluation efforts. However, among all the quasi-educational reasons for less than optimal use of class time, including enforcement of discipline, homeroom activities, teacher absence, fire drills, loud speaker announcements, and so on, standardized testing is unlikely to be a major contributor to time lost from instruction. Indeed, test information can increase instructional efficiency.

Improperly Judge Teacher and School Competency. Results from standardized tests are viewed by many as inappropriate data to evaluate teachers, schools, and school programs. The most frequent reasons given are that the scope of tests is too narrow and that differences in student ability among schools are too large for test score differences to provide for fair evaluation of teaching.

Professionals in education should answer partly for the performance of students and be responsible for in-school services and opportunities. But test scores alone furnish inadequate data for judgments about the quality of schooling.

Society is Abused

Test Publishers Are Not Accountable. The claim is made that testing companies

> ... are shrouded in secrecy, keeping test content studies and reports secret and providing minimal and often misleading information about tests to test-takers.[19]

ETS's answer has been that

> Privacy protection (of the test taker) is not secrecy ... The desirability of test security does not imply a desire for secrecy ... For virtually every major testing program at ETS, complete, full-length sample tests are available with supporting information, including directions for self-scoring, and discussion of individual questions and question types. There are technical reports, with data on validity, reliability, and other areas of psychometric concern.[20]

The anti-test forces go on and note that

> Anyone who must deal with (ETS) is completely at the mercy of this private monopoly. He or she must take the tests ETS offers, must supply the information ETS requests, and must pay the fees ETS charges.[21]

ETS responds that

> Virtually all admissions testing and related services conducted by ETS are performed under agreement with (other) organizations ... Each institution — and in many cases, each department or school — is sovereign with regard to its own decision to require one or more tests (or no test), and how much weight to place on test results in specific selection processes.[22]

NCME, in a policy statement recently completed, addressed some of these concerns. Although the statement dealt with admissions testing, it is applicable to a wider range of tests. To help test takers, NCME advocates that

"the correlation between SAT test results and first-year college grades was not better than a random process such as a roll of the dice."[8] Tests can't predict many criteria of success, but they can predict academic achievement. Tests aren't perfect predictors, of course, and we tend to remember the exceptions. If there is a legitimate complaint in this area it is that tests have been used to make very fine distinctions among applicants all of whom are likely to succeed.

Coachability. Another alleged test flaw is that tests are coachable. As one critic put it, "Anything you can get rusty on, you can brush up on." Of course tests are coachable, and the testing industry itself had added to its woes by pretending that coaching effects either didn't exist or were negligible. The testing industry has, however, more recently responded to this criticism in three responsible ways. Replacing the term "intelligence" with "developed abilities" recognizes the learned nature of the knowledges and skills measured by the mental tests. Making editions of nonoperational forms of the tests available or making content specifications more detailed is a step in opening up the nature of the tests. And admitting that coaching does have a systematic effect, even though in some cases it may be small, does improve the credibility of the testing industry.

Coaching is proper and desirable if it improves the skills allegedly measured by the test. Coaching is undesirable either if it provides practice on the specific items that appear on the test, because then the test no longer measures what is intended, or if access to coaching is unequal. The latter is quite possible; coaching schools charge high fees that not everyone can afford.

Bias. The recently adopted NCME policy statement on admissions testing addresses the test bias issue directly.

> ... some tests have been viewed as sexually, racially, ethnically, or socio-economically biased because of the findings that some groups perform less well on the tests than others. Although some interpret group differences in performance as bias in a test, it is now commonly understood among measurement experts that the mere existence of such group differences in performance is not evidence of bias. These differences may reflect individualities of health, growth, and achievement, some of which can be strengthened through increased services and opportunities. Few people suggest that differentials in school-related performances would disappear if there were no tests. Since achievement is desirable for our citizens, NCME believes it is socially constructive to attack the cause of the unequal performances that measuring instruments help discover.[9]

Tests have also been viewed as biased because they contain items considered insulting to some groups or which, with "fancy words", ask about the "niceties, ... aesthetics, and humanities of America's privileged class."[10] Offending items that refer to abilities unrelated to the criterion behavior should be avoided; I believe that test developers have increased sensitivity in this regard.

As Thorndike and Hagen note, "... tests do become the instruments through which access to education and jobs is disproportionately barred to members of (certain) groups."[11] Are they unfairly barred? Treating groups equitably does not necessarily mean treating them equally. Tests can help society reach whatever definition of fair and equitable treatment it sets as a goal.

Students are Wronged

One of the most ardent testing critics says,

> I feel emotionally toward the testing industry as I would toward any other merchants of death. I feel that way because of what they do to the kids. I'm not saying they murder every child — only 20% of them.[12]

How are the students hurt?

Limit Opportunities. For one, tests are claimed to have limited the opportunities of students. Presumably, students are labeled and stored on shelves to gather dust and disintegrate. Three reactions to this claim are worth mentioning here. First, there are times when the labeling of individuals is needed, for example, to sort the competent from the incompetent. As Thomas Fitzgibbon writes, "It is wrong ... to berate tests as if they were the cause of competition."[13] Second, the purpose of testing in schools is to improve education and not, as the imagery of students stored on shelves implies, to label, sort, and put students aside. Unfortunately, shunting aside of students has undoubtedly occurred, especially in conjunction with intelligence test results. As Arthur Jensen notes:

> There's no more point in measuring I.Q. (in the schools) than in measuring the basal metabolism rate. Pupils, teachers and parents need to know whether the pupil is learning what the school is trying to teach, but I can't see that they need to know the child's I.Q.[14]

When test scores are used to plan appropriate instructional interventions, they can increase rather than limit opportunities for students.

Risk Psychological Health. Students are said to be psychologically harmed by tests. Specifically, testing is seen as "a horrible, degrading experience" that always provokes anxiety and damages the test takers' self esteem when they fail. Educational procedures should support students, not discourage them.

There *is* discomfort associated with testing. Some of the discomfort comes from the inappropriate uses to which the tests are put, some comes from overzealous teachers and parents, and some is inherent in any task that can be failed. It is Robert Ebel's view that

> Of the many challenges to a child's peace of mind caused by such things as angry parents, playground bullies, bad dogs, shots from the doctor, and things that go bump in the night, standardized tests must surely be among the least fearsome for most children.[15]

Even though taking tests is not the most fearsome event a person experiences, and knowledge of results is not the most discouraging information a person receives, the challenge remains to test users and developers to be sure the support tests give learning and the other benefits of testing more than make up for any negative consequences to the psychological well being of the test taker.

Invade Privacy and Violate Confidentiality. Tests have been criticized because they intrude upon the privacy of those being examined by making them reveal themselves either without realizing that they are doing so or because they feel forced to do so. The use of any instrument to gather information about an individual, including interviews and other devices that some would substitute for standardized paper-and-pencil tests, can also be consid-

Conclusion

My comments thus far have been defensive, containing my views on the many alleged failings of standardized tests. It is also important, however, that the benefits of testing be explicitly stated. Thorndike and Hagen list the following social benefits of testing:

1. Protection from incompetence and ineptitude,
2. Efficient use of social resources,
3. Efficient educational procedures,
4. Discovering talent in all segments of education, and
5. Additions to knowledge.[26]

It is also well to keep in mind some fundamental beliefs that I suspect all of us in this room hold. Quoting from the NCME statement on admissions testing:

> Many educational decisions can be improved by objective and equitable assessments of the achievements and characteristics of individuals.
>
> Tests can provide such assessments which, in many instances, are more objective and more equitable than other forms of evaluation.
>
> The extent to which tests can contribute to sound educational decisions depends on the intrinsic quality of the tests and on proper interpretation and use of test scores.[27]

One final caution. We can do much disservice by focusing upon testing alone. Tests are the tip of the iceberg of the tension among many groups and many values in our society. They are the symptom, not the disease itself. Strengthening tests will improve the symptoms but not the disease.

Footnotes

[1]As quoted in Eric Gardner, "Review of *The Myth of Measurability*," *Journal of Educational Measurement*, Winter 1975, p. 405.
[2]Barbara Lerner, *The War on Testing: Detroit Edison in Perspective*, Princeton, N.J.: Educational Testing Service, 1979, p. 4.
[3]*Ibid.*, p. 3.
[4]As quoted in *Education Daily*, June 20, 1979, p. 5.
[5]Elliott W. Eisner, "Some Alternatives to Quantitative Forms of Educational Evaluation." *The Testing Digest*, Spring 1979, p. 4.
[6]For a review of supporting studies, see pages 7-9 in Clinton B. Walker et al., *CSE Criterion-Referenced Test Handbook*. Los Angeles: Center for the Study of Evaluation, UCLA, 1979.
[7]Bernard McKenna, "What's Wrong with Standardized Testing?" *Today's Education*, March/April, 1977, p. 36.
[8]As quoted in Tony Mauro, "Nader Criticizes College Board Tests," *Ithaca Journal*, January 15, 1980, p. 10.
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[10]Roland A. Foulkes. "Human Rights vs. Qualifying Tests." *The Cornell Daily Sun*, March 2, 1978, p. 5.
[11]Robert L. Thorndike and Elizabeth Hagen, *Measurement and Education in Psychology and Education*. New York: John Wiley, 1977, p. 617.
[12]As quoted in Sherwood Kohn, "The Numbers Game: How the Test Industry Operates," *National Elementary Principal*, July/August, 1975, p. 14.
[13]Thomas J. Fitzgibbon, "Dear Mama: Why Don't They Love Me Anymore?" *Measurement in Education*, Fall 1975, p. 4.
[14]Emily C. Harris, "Arthur R. Jensen: Getting Closer to the Brain," *Education Daily*, May 8, 1979, p. 8.
[15]Robert L. Ebel, "The Paradox of Educational Testing," *Measurement in Education*, Fall 1976, p. 5.
[16]Clinton I. Chase, "Classroom Testing and the Right to Privacy," *Phi Delta Kappan*, December 1976, pp. 331-332.
[17]*De-test*, Spring 1979, p. 8.
[18]Vito Perrone. *The Abuses of Standardized Tests*. Bloomington, Indiana: Phi Delta Kappa Educational Foundation, Fastback No. 92, p. 10.
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[20]*Accountability, Fairness, and Quality in Testing*. Princeton, New Jersey: Educational Testing Service, ca. 1979. (no pagination)
[21]Kim Masters. "Why Your Daughter Didn't Get Into Law School." *The Testing Digest*, Spring 1979, p. 3.
[22]*Accountability, Fairness, and Quality in Testing*. Princeton, New Jersey: Educational Testing Service, ca. 1979. (no pagination)
[23]"NCME Statement on Educational Admissions Testing." Washington, D.C.: National Council on Measurement in Education, pp. 2-3.
[24]Quoted in Edward B. Fiske, "Nader's Challenge to Testing," *New York Times*, January 15, 1980, p. C1.
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[26]Robert L. Thorndike and Elizabeth Hagen, *Measurement and Evaluation in Psychology and Education*. New York: John Wiley, 1977, pp. 620-623.
[27]"NCME Statement on Educational Admissions Testing," *op. cit.*, pp. 1-2.

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